

Claim Amendments

Claims 1-3 (canceled).

1 4. (previously presented) A data storage and retrieval
2 system comprising:

3 an optical memory constituted as a vitreous fluorescent
4 photosensitive body selected from the group which consists of
5 fluorescent photosensitive glass and fluorescent photosensitive
6 vitreous ceramic constituting an information recording medium; and

7 at least one laser for directing a beam at said memory
8 and adapted to read stored information from and write information
9 to be stored to said memory.

1 5. (currently amended) The system defined in claim 4
2 wherein said memory is composed of a fluorescent photo-sensitive
3 photosensitive glass.

1 6. (currently amended) The system defined in claim 4
2 wherein said memory is composed of a fluorescent photosensitive
3 vitroceramic.

1 7. (previously presented) The system defined in claim 4
2 which comprises a confocal microscope;

3 a tunable laser having light pulses at a rate of a
4 maximum of 100 fs for reading and writing from and to said memory
5 through said confocal microscope;

6 a vertical scanning system and a radial scanning system
7 for the movement or writing and excitation beams over said memory;

8 an engine for rotating said memory; and

9 an excitation laser having a beam perpendicular to a
10 fluorescent beam from said memory and provided with a vertical
11 scanner for reading said memory by a one-photon process.